0	For receiving Office use only			
0-1	International Application No.			
0-2	International Filing Date			
0-3	Name of receiving Office and "PCT International Application"			
0-4	Form - PCT/RO/101 PCT Request			
0-4-1	Prepared Using	PCT Online Filing Version 3.50 (Build 0001.162)		
0-5	Petition			
	The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty			
0-6	Receiving Office (specified by the applicant)	European Patent Office (EPO) (RO/EP)		
0-7	Applicant's or agent's file reference	1176WOORD01		
I	Title of Invention	NOVEL PYRROLODIHYDROISOQUINOLINES AS PDE10 INHIBITORS		
II	Applicant			
II-1	This person is:	applicant only		
II-2	Applicant for	all designated States except US		
II-4	Name:	ALTANA PHARMA AG		
II-5	Address:	Byk-Gulden-Str. 2 78467 Konstanz Germany		
II-6	State of nationality	DE		
II-7	State of residence	DE		
11-8	Telephone No.	+49-(0)7531-84-5320		
II-9	Facsimile No.	+49-(0)7531-84-5321		
II-10	e-mail	DEKON.IPPA-DE@altanapharma.com		

III-1	Applicant and/or inventor			
III-1-1	This person is:	applicant and inventor		
III-1-2	Applicant for	US only		
III-1-3	Inventor for	AP: (BW GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW); EA: (AM AZ BY KG KZ MD RU TJ TM); EP: (AT BE BG CH&LI CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PL PT		
		RO SE SI SK TR); OA: (BF BJ CF CG CI CM		
		GA GN GQ GW ML MR NE SN TD TG); AE AG AL		
		AM AT AU AZ BA BB BG BR BW BY BZ CA CH&		
		LI CN CO CR CU CZ DE DK DM DZ EC EE EG		
		ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM		
		PG PH PL PT RO RU SC SD SE SG SK SL SY		
		TJ TM TN TR TT TZ UA UG US UZ VC VN YU		
		ZA ZM ZW		
III-1-4	Name (LAST, First)	VENNEMANN, Matthias		
III-1 - 5	Address:	Leinerstraße 20		
		78462 Konstanz		
		Germany		
III-1-6	State of nationality	DE		
III-1-7	State of residence	DE		

III-2	Applicant and/or Inventor			
III-2-1	This person is:	applicant and inventor		
III-2 - 2	Applicant for	US only		
III-2-3	Inventor for	AP: (BW GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW); EA: (AM AZ BY KG KZ MD RU TJ TM); EP: (AT BE BG CH&LI CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PL PT RO SE SI SK TR); OA: (BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG); AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH&LI CN CO CR CU CZ DE DK DM DZ EC EE EG		
		ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW		
III-2-4	Name (LAST, First)	BAER, Thomas		
III-2-5	Address:	Berggaessle 5 78479 Reichenau Germany		
III-2 - 6	State of nationality	DE		
III-2-7	State of residence	DE		

III-3	Applicant and/or inventor				
III-3-1	This person is:	applicant and inventor			
III-3-2	Applicant for	US only			
III-3-3	Inventor for	AP: (BW GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW); EA: (AM AZ BY KG KZ MD RU TJ TM); EP: (AT BE BG CH&LI CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PL PT RO SE SI SK TR); OA: (BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG); AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH&LI CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW			
111-3-4	Name (LAST, First)	BRAUNGER, Juergen			
III-3-5	Address:	Dorfwiesenweg 26 78465 Konstanz Germany			
III-3-6	State of nationality	DE			
III-3-7	State of residence	DE			
III-4	Applicant and/or inventor				
III -4 -1	This person is:	inventor only			
111-4-4	Name (LAST, First)	MAIER, Thomas			
III-4-5	Address:	Panoramaweg 31 78333 Stockach Germany			
111-5	Applicant and/or inventor				
III-5-1	This person is:	inventor only			
III-5-4	Name (LAST, First)	GRAEDLER, Ulrich			
III-5-5	Address:	Fichtestr. 15 69126 Heidelberg Germany			
III-6	Applicant and/or inventor				
III-6-1	This person is:	inventor only			
III-6-4	Name (LAST, First)	GIMMNICH, Petra			
III-6-5 	Address:	Sonnenbuehlstr. 58 78464 Konstanz Germany			

III - 7	Applicant and/or inventor			
III-7-1	This person is:	inventor only		
111-7-4	Name (LAST, First)	QUINTINI, Gianluca		
III-7-5	Address:	Eichhornstr. 51 78464 Konstanz Germany		
III-8	Applicant and/or inventor			
III-8-1	This person is:	inventor only		
111-8-4	Name (LAST, First)	CIAPETTI, Paola		
III-8-5	Address:	12, Route des Romains 67120 ALTORF France		
III-9	Applicant and/or inventor			
III-9-1	This person is:	inventor only		
III-9-4	Name (LAST, First)	CONTRERAS, Jean-Marie		
III-9-5	Address:	7d, Rue du Petit Rempart 67230 BENFELD France		
III-10	Applicant and/or inventor			
III-10-1	This person is:	inventor only		
III-10-4	Name (LAST, First)	WERMUTH, Camille Georges		
III-10-5	Address:	3, Rue de la Cote d'Azur 67100 STRASBOURG France		
IV-1	Agent or common representative; or	France		
18-1	address for correspondence			
	The person identified below is hereby/ has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:	agent		
IV-1-1	Name (LAST, First)	WOLF, Ulrich		
IV-1-2	Address:	c/o ALTANA Pharma AG, Byk-Gulden-Str. 2 78467 Konstanz Germany		
IV-1-3	Telephone No.	+49(0)7531-84-5320		
IV-1-4	Facsimile No.	+49(0)7531-84-5321		
IV-1-5	e-mail	dekon.ippa-de@altanapharma.com		
IV-1-6	Agent's registration No.	052382.9		

$\overline{\mathbf{v}}$	DESIGNATIONS	
V-1	The filing of this request constitutes under Rule 4.9(a), the designation of all Contracting States bound by the PCT on the international filing date, for the grant of every kind of protection available and, where applicable, for the grant of both regional and national patents.	
VI-1	Priority claim of earlier regional application	
VI-1-1	Filing date	30 June 2003 (30.06.2003)
VI-1-2	Number	03014424.0
VI-1-3	Regional Office	EP
VI-2	Priority document request	
	The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s):	VI-1
VII-1	International Searching Authority Chosen	European Patent Office (EPO) (ISA/EP)
VII-2	Request to use results of earlier search; reference to that search	
VII-2-1	Date	05 November 2003 (05.11.2003)
VII-2-2	Number	03014424.0
VII-2-3	Country (or regional Office)	ĖΡ
Vill	Declarations	Number of declarations
VIII-1	Declaration as to the identity of the inventor	-
VIII-2	Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent	1
VIII-3	Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application	-
VIII-4	Declaration of inventorship (only for the purposes of the designation of the United States of America)	1
VIII-5	Declaration as to non-prejudicial disclosures or exceptions to lack of novelty	-

VIII-2-1	Declaration: Entitlement to apply for				
	and be granted a patent Declaration as to the applicant's				
	entitlement, as at the international filing	in relation to this international			
	date, to apply for and be granted a	application			
	patent (Rules 4.17(ii) and 51bis.1(a)(ii)),				
	in a case where the declaration under				
	Rule 4.17(iv) is not appropriate:				
	Name (LAST, First)	ALTANA PHARMA AG is entitled to apply			
		for and be granted a patent by virtue of			
		the following:			
VIII-2-1(i		ALTANA PHARMA AG is entitled as employer			
i)		of the inventor, MAIER, Thomas			
VIII-2-1(i		ALTANA PHARMA AG is entitled as employer			
i)		of the inventor, GRAEDLER, Ulrich			
VIII-2-1(i		ALTANA PHARMA AG is entitled as employer			
i) 		of the inventor, GIMMNICH, Petra			
VIII-2-1(i		ALTANA PHARMA AG is entitled as employer			
i) 		of the inventor, QUINTINI, Gianluca			
VIII-2-1(i		ALTANA PHARMA AG is entitled as employer			
i) 		of the inventor, VENNEMANN, Matthias			
VIII-2-1(i i)		ALTANA PHARMA AG is entitled as employer			
		of the inventor, BAER, Thomas			
VIII-2-1(i		ALTANA PHARMA AG is entitled as employer			
i)		of the inventor, BRAUNGER, Juergen			
VIII-2-1(i		an assignment from CIAPETTI, Paola to			
v)		ALTANA PHARMA AG, dated 07 February 2004			
		(07.02.2004)			
VIII-2-1(i		an assignment from CONTRERAS, Jean-Marie			
v)		to ALTANA PHARMA AG, dated 16 March 2004			
		(16.03.2004)			
VIII-2-1(i		an assignment from WERMUTH, Camille			
v)		Georges to ALTANA PHARMA AG, dated 05			
		March 2004 (05.03.2004)			
	This declaration is made for the	all designations except the designation			
x)	purposes of:	of the United States of America			

VIII-4-1- Prior applications:

•		
VIII-4-1	Declaration: Inventorship (only for the purposes of the designation of	
	the United States of America)	
	Declaration of Inventorship (Rules 4.17(iv) and 51bis.1(a)(iv)) for the purposes of the designation of the United States of America:	I hereby declare that I believe I am the
		original, first and sole (if only one
		inventor is listed below) or joint (if
	Office States of America.	more than one inventor is listed below)
		· ·
		inventor of the subject matter which is
		claimed and for which a patent is
		sought.
		This declaration is directed to the
		international application of which it
		forms a part (if filing declaration with
		application).
		I hereby declare that my residence,
		mailing address, and citizenship are as
		stated next to my name.
		I hereby state that I have reviewed and
		understand the contents of the above-
		identified international application,
		including the claims of said
		application. I have identified in the
		request of said application, in
		compliance with PCT Rule 4.10, any claim
		to foreign priority, and I have
		identified below, under the heading
		"Prior Applications", by application
		number, country or Member of the World
		Trade Organization, day, month, and year
		of filing, any application for a patent
		or inventor's certificate filed in a
		country other than the United States of
		America, including any PCT international
		application designating at least one
		country other than the United States of
		America, having a filing date before
		that of the application on which foreign
		priority is claimed.

VIII-4-1- Name (LAST, First)

or country) VIII-4-1- Mailing address:

VIII-4-1- Inventor's Signature:

the agent)

application)

VIII-4-1- Date:

Rule 26ter after the filing of the

after the filing of the international

VIII-4-1- Residence:

VIII-4-1- Citizenship:

1-1

1-2

1-3

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I hereby acknowledge the duty to disclose information that is known by me to be material to patentability as defined by 37 C.F.R. § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the PCT international filing date of the continuation-in-part application. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. VENNEMANN, Matthias Konstanz, Germany (city and either US State, if applicable, Leinerstraße 20 D-78462 Konstanz Germany DE /Matthias VENNEMANN/ (if not contained in the request, or if declaration is corrected or added under international application. The signature must be that of the inventor, not that of 30 June 2004 (30.06.2004) (of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter

VIII-4-1- 2-1	Name (LAST, First)	BAER, Thomas		
VIII-4-1- 2-2	Residence: (city and either US State, if applicable, or country)	Reichenau, Germany		
VIII-4-1- 2-3	Mailing address:	Berggaessle 5 D-78479 Reichenau Germany		
VIII-4-1- 2-4	Citizenship:	DE		
VIII-4-1- 2-5	Inventor's Signature: (if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the international application. The signature must be that of the inventor, not that of the agent)	/Thomas BAER/		
VIII-4-1- 2-6	Date (of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)	30 June 2004 (30.06.2004)		
VIII-4-1- 3-1	Name (LAST, First)	BRAUNGER, Juergen		
VIII-4-1- 3-2	Residence: (city and either US State, if applicable, or country)	Konstanz, Germany		
VIII-4-1- 3-3	Mailing address:	Dorfwiesenweg 26 D-78465 Konstanz Germany		
VIII-4-1- 3-4	Citizenship:	DE		
VIII-4-1- 3-5	Inventor's Signature: (if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the international application. The signature must be that of the inventor, not that of the agent)	/Juergen BRAUNGER/		
VIII-4-1- 3-6	Date (of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)	30 June 2004 (30.06.2004)		

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X	Check list	number of sheets	electronic file(s) attached
X-1	Request (including declaration sheets)	11	✓
<-2	Description	97	✓
<- 3	Claims	22	√
<-4	Abstract	1	✓
(-5	Drawings	0	✓
(-7	TOTAL	131	<u> </u>
	Accompanying Items	paper document(s) attached	electronic file(s) attached
K-8	Fee calculation sheet	-	✓
K-11	Copy of general power of attorney	-	reference no. 00026160.2
(-17	PCT-SAFE physical media	-	-
(-19	Figure of the drawings which should accompany the abstract		
(-20	Language of filing of the international application	English	
(-1	Signature of applicant, agent or common representative	(PKCS7 Digital Signa	iture)
-1-1	Name (LAST, First)	WOLF, Ulrich	
-1-2	Name of signatory		
(-1-3	Capacity		

FOR RECEIVING OFFICE USE ONLY

10-1	Date of actual receipt of the purported international application	
10-2	Drawings:	
10-2-1	Received	
10-2-2	Not received	
10-3	Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application	,
10-4	Date of timely receipt of the required corrections under PCT Article 11(2)	
10-5	International Searching Authority	ISA/EP
10-6	Transmittal of search copy delayed until search fee is paid	

FOR INTERNATIONAL BUREAU USE ONLY

11-1	Date of receipt of the record copy by		
11-1	pate of receipt of the record copy by		
	the International Bureau		
	line international bureau		
	1		

PCT (ANNEX - FEE CALCULATION SHEET)

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(This sheet is not part of and does not count as a sheet of the international application)

0	For receiving Office use only			
)-1	International Application No.			
)-2	Date stamp of the receiving Office			
	·	· <u>.</u>		<u>, , , , , , , , , , , , , , , , , , , </u>
)-4	Form PCT/RO/101 (Annex) PCT Fee Calculation Sheet	_		
-4-1	Prepared Using	PCT Online Fi	ling	
		Version 3.50	(Build 0001.162	2)
-9	Applicant's or agent's file reference	1176WOORD01		
	Applicant	ALTANA PHARMA AG		
2	Calculation of prescribed fees	fee amount/muliplier	Total amounts (EUR)	
12-1	Transmittal fee T	4>	100	
12-2-1	Search fee S	4>	1550	
12-2-2	International search to be carried out by	EP		
12-3	International filing fee		1	
	(first 30 sheets) i1	902		
12-4	Remaining sheets	101	1	
12-5	Additional amount (X)	10		
12-6	Total additional amount i2	1010	1	
12-7	i1 + i2 = i	1912	1	
12-12	Electronic Filing reduction (Full) R	-129		
12-13	Total International filing fee (i-R)	4>	1783	· · · · · · · · · · · · · · · · · · ·
12-14	Fee for priority document			
	Number of priority documents requested	1		
2-15	Fee per document (X	30		
2-16	Total priority document fee: P	4>	30	
2-17	TOTAL FEES PAYABLE (T+S+I+P)	4>	3463	
2-19	Mode of payment	authorization to charge deposit account		
12-20	Deposit account instructions			
	The receiving Office	European Pater	nt Office (EPO)) (RO/EP)
2-20-1	Authorization to charge the total fees indicated above.	✓		
12-20-2	Authorization to charge any deficiency o credit any overpayment in the total fees indicated above.	· /		
2-20-3	Authorization to charge the fee for priority document.	✓		
2-21	Deposit account No.	28000022		
2-22	Date	30 June 2004 (30.06.2004)		
2-23	Name and signature	ALTANA PHARMA AG,		
	1	/Ulrich WOLF/		

PCT (ANNEX - FEE CALCULATION SHEET)

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(This sheet is not part of and does not count as a sheet of the international application)

REMARKS

m) does not reflect the re Version 3.50 (Build atthias; BAER, Thomas homas; GRAEDLER, I, Paola; CONTRERAS, ventors only. They are A, PH and US.

